Sinclair QL

Sinclair **QUANTA**
MAGAZINE
1984 TO 2010

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BUMPER
Christmas Issue

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Information on the Association

Membership of QUANTA, the independent QL user group, is by annual subscription. The Membership Secretary can supply full details. Copies of the association's constitution & annual accounts are available from the Secretary. There is an extensive software library. There are active national subgroups. Details are given in the Member's Guide and in this magazine.

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[By special request from our friends on the ql-users list, this extra page is dedicated to the Dilwyn Jones' Qalendar 2011 - Happy Christmas -
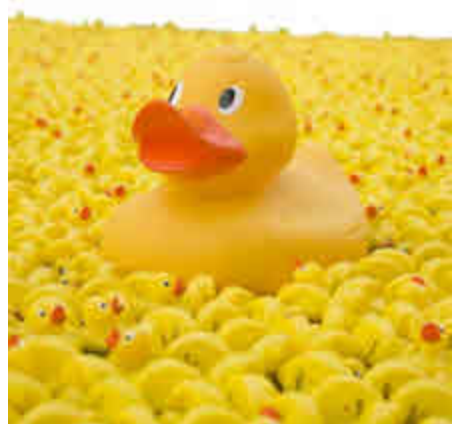

Allo! Allo!
The Fallen Madonna with the BIG Boobies

And...
The Boobies in greater detail!

Or maybe
2 little duQLings is more to your taste

OR Even
A Bare Breasted DUQK
(well, almost back on topiq!)

QUANTA Magazine

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QUANTA Magazine

<u>EDITORIAL</u>   John Gilpin

It is said that "All good things have to come to an end" and the editorship of QUANTA is one of them. This will be my last issue of QUANTA Magazine and I would like to thank everyone who has helped me in any way for their assistance over the last 5 or 6 years that I have been sitting in the acting editor's chair. I have enjoyed the experience tremendously but feel that as another volume comes to a close, it is time for me to step down and leave the post vacant for some new blood to come along and take your magazine forward to new heights.

At the same time, I have to report that Stephen Poole, a regular contributor for the past ten years or so has also decided to take a back seat and stop writing for QUANTA and QL Today magazines. He is heavily involved with research into Global Warming and feels that the time is right for him to dedicate his time to that and we at QUANTA would like to pass on to him and his wife our best wishes for the future and grateful thanks for all that you have done for us in the past. I understand that we have probably not heard the last of Steve as he remains a QUANTA member and (hopefully) will send us his thoughts on anything that he has a view on relating to future articles published in this (and other) magazine(s). He leaves us with a couple of articles for both QUANTA and QL Today Magazines and I will be corresponding with Jochen Merz so that we can publish these concurrently in the near future. (We also have an article for this issue to set you thinking about Viruses, Rabbits and Foxes while the Christmas Pudding settles).

This brings me on to another very pleasant topic - that of wishing you all and your families and friends a Very Merry Christmas and A Happy and Prosperous New Year 2011.

And finally a reminder that if QUANTA is going to survive and bring you and others who have yet to sample its membership all the facilities that we have been able to offer during the past twenty-seven years, then new blood is required to bring forth new ideas and it may be YOU who has these skills. Please don't set light to your Christmas Pud with the nomination form we sent you last month. Please give a little of your time and expertise to QUANTA by offering your badly needed services.

Thanks.   John Gilpin.

CHAIRMAN'S NOTES   Sarah Gilpin

Happy Christmas and all our best wishes for the New Year from the Committee of QUANTA. Let us all hope that 2011 is better for everyone than this current year has been.

We have approved a request for a loan from Rich Mellor to provide a new order of QL membranes. QUANTA has made two such loans to Rich in the past and both have been repaid promptly, so we are pleased to provide this service once more. After all the QL would not work without a membrane and they do wear out. We thank Rich for all his efforts in keeping spare parts for QL's available.

Last months magazine included nomination papers for those prepared to join the Committee or in any other way help QUANTA. Some months ago we asked for volunteers to help proof read the scanned copies of early QUANTA magazines so that they could be made available on the web site. We have had a volunteer, Lee Privett, this week to help with this project. I know how time consuming this is, as the print of the original is small and hard to read, the proof reading has to be undertaken in small doses, (otherwise your eyes and brain start imagining mistakes or missing them altogether).

Arrangements for the Annual General Meeting 2011 are well in hand, the venue has been booked. Once again we are looking at a two day meeting and can recommend local accommodation on request.

COMMITTEE PRÉCIS   Alison Southern

I hope you have all received your nomination forms in the last issue, please do not just throw them away but consider whether you or someone you know could help out by joining the committee, especially if you know someone to take on the Treasurer's position. Complaints have been made about the fact that the committee is concentrated in the north and also that little seems to be happening, especially with regards to the website. We all have other time commitments, so please if you want to make a difference get someone to nominate you, the more people we have who are willing to help the quicker we can do things. Talking about the website, I think we are close to being ready to launch on this, more information will be found in this issue. We are looking forwards to the AGM in April and I hope to see as many of you as possible there, it's usually a good weekend and the meal on the Saturday night an excellent chance to talk to other Qlers.

A SIMPLE GUIDE TO THE POINTER ENVIRONMENT

[A couple of months ago a Qler sent a disc to Dilwyn Jones which contained an article on the Pointer Environment. Unfortunately, due to some mix-up, it turns out that the Qler who sent it wrote a similar article for a Magazine (some years ago) but this was not the one he wrote. So far, we have been unable to ascertain who did write this article and we are asking for your help. I am including a few paragraphs from the article in the hopes that someone out there will recognise something about the article and be able to put us in touch with the author.

If you are able to help with this, please get in touch
Editor@quanta.org.uk
This is a very interesting article , full of solid facts about the PE and I am certain that some of you would be able to use it in your programmes. - Ed]

A simple guide to the Pointer Environment

I have been told there are a lot of QL users "out there" with minimal knowledge of computers, QLs, the Pointer Environment and many other things. This article describes, explains and demonstrates the Pointer Environment while assuming only a little bit of QL knowledge.

Next month's article will cover QPAC2 and other Things that could not be put here due to lack of space. Some of the explanations were put in an appendix at the end of the article. Inexperienced users may wish to refer to the appendix while they are still gaining their "QL-legs".

If you know next to nothing about the QL, may I suggest that you browse through the QL User Guide (don't worry if you don't understand it), and gossip with some people who know about computers - you may pick something up. See Appendix "Commands you'll find useful" for the SuperBASIC commands to use when taming your QL[next month].

A good source of QL people ready to talk until the cows go home is a local QUANTA sub-group. QUANTA is an independent QL user group that offers these benefits to its members - a monthly Magazine, access to a large software library and a network of local sub-groups. The Magazine is a good source of information where problems and their solutions are discussed. The

software library is incredibly useful and I don't know how non-QL users live without it.

The novice QL user is likely to get more from attending QUANTA meetings than most people. Most of a novice user's problems will have been experienced and solved by the people there, so don't be afraid to ask questions. No-one in computing knows everything - be very wary of people who think they do.

Expanding your QL

The QL computer is supplied with the Qdos operating system and its SuperBASIC interpreter and the four Psion programmes - Quill, Archive, Abacus, Easel and (sometimes) a games microdrive cartridge. No disc drives, printers or extra software were ever supplied with the standard set-up by Sinclair.

This gives the novice user some interesting problems. It is possible to do plenty of useful work on an unexpanded QL with just the Psion programmes but this does not do the user or the machine justice.

Disc drives are faster than microdrive cartridges, more reliable and, when storing large amounts of information, much cheaper than microdrive cartridges. A floppy disc costing less than 50p holds 720Kb of information while a microdrive cartridge holds just over 100Kb and costs about £2. In real terms, when you fill a single disc with information it is at least £10 cheaper than storing the same amount of information on microdrive cartridges. It is worth having a pair of reliable disc drives - cheap, unreliable disc drives are not worth the inconvenience that they cause.

Additional memory allows the user to edit longer documents with greater ease and have more than one programme in memory. A unique feature of Qdos is that it uses "free/spare memory" to speed up file access, remembering the contents of files it has recently handled.

On my Gold Card QL with plenty of free memory (1252Kb at the moment), file handling can almost be too fast. This happened when I was converting some C68 manuals into DataDesign files. The manuals were converted from Quill documents to text files and saved on my slow 5.25" drive. A small SuperBASIC programme read the work files and produced a DataDesign database. The text files had to be edited and re-saved

occasionally because the SuperBASIC programme sometimes became confused. So a loop of "write text file", "process text file", "find a problem", "fix it" and go back to "write text file" started. This was faster on a Gold Card because when "write text file" was done, Qdos had enough free/spare memory to keep a copy of the text file in memory. When the "process text file" started, Qdos checked that the disc had not been changed and just used the memory-based copy of the text file. This process of keeping copies of files in free memory without any involvement of the user is called "slaving" in the QL Technical Guide. This tactic of the QL may seem like common sense but no other operating system does this as well as Qdos - other operating systems insist on having a fixed amount of memory for buffering. I use an improvement of Qdos, Minerva, which has given me no problems with Gold Card - it has been said that the Sinclair versions of Qdos don't take as much advantage of the Gold Card as Minerva. I have no intention of messing about with a Trump Card and a Sinclair version of Qdos to verify this.

Hardware requirements

Back to the Pointer Environment. This needs a QL with at least 384Kb of memory, a monitor, power supply and a copy of a programme called 'ptr_gen'. What an anti-climax! After the last paragraph you were beginning to think you'd need a second mortgage to afford all the kit.

Brief definition: Multi-tasking.

This is where a computer can have more than one programme in memory and split its working time between the different programmes (jobs). A bit like a secretary answering a phone, writing a memo using a word-processor, drinking coffee and chatting with a friend.

The QL's multi-tasking does not have "virtual machine" protection so if a programme crashes, it can affect all the programmes in your computer - the equivalent of the secretary swearing at a telephone caller instead of the photocopier and dropping the coffee on the word processor.

"Virtual machine" protection on a micro-computer is very unusual - OS/2 on a 486/386 PC has it but Qdos has yet to take advantage of the 68030 or 68040 where virtual machines may be possible.

[I hope that this introduction is sufficient to identify both the article and it's author. There is plenty more to come in this article but we are currently unable to publish it without the author's permission – Ed]

USING ASSEMBLER IN ARCHIVE   George Gwilt

I n a previous article I described an ARCHIVE program for printing labels. This program contains an assembler routine which is given below. I must confess now that this is not the original routine. When I started writing this I realised that the assembler program I had been using for twenty years was too complicated so I recast it.

The purpose of the routine is to set the required printer driver for labels to the file "xchange_dat" at the start and to reset the original "xchange_dat" when the labels have been printed. My original idea was to copy "xchange_dat" to a temporary file and then copy the required driver to "xchange_dat". When the labels were printed I deleted the temporary file after copying it back to "xchange_dat".

This seems simple enough. However, the program to copy f1 to f2 is rather elaborate. It has to do the following:

1.   Open the file f1.
2.   Find its header to determine the length of file, K.
3.   Allocate K bytes from the heap.
4.   Load f1 to the allocated space.
5.   Open f2.
6.   Save the data in the allocated space to f2.
7.   Set the correct header information in f2.

And this is not all. I wanted the date and version number of "xchange_dat" to remain unchanged. This required calls to IOF.DATE and IOF.VERS.

It suddenly came to me that a better way of achieving my object would be simply to change the name of the files. I would alter "xchange_dat" to some temporary name and change the name of the correct driver to "xchange_dat". This would be reversed when the labels were printed. The assembler routine would then boil down to one thing: rename f1 to f2. Indeed the new routine, given below, assembles to about a third of the size of the original.

One other thing I should mention is that the assembler code is also used for another program and contains two more routines which have the

effect of TRA 0 and TRA 1. These routines respectively turn off and turn on printer translate tables.

The Assembler Code

```
;
; This is loaded into an ARCHIVE program by 'load usr . . .'  and used as the
; function 'usr(n,string)' where  'n'  appears in D0 and A0 points to an
; ARCHIVE string.
;
; The form of the ARCHIVE string is:
;
;        _____
;       | L    | filename1 |  /  | file name2 |
;
;       < 1 ><     L1     >< 1 ><    L2     >
;
; On entry D0 contains the code 1, 2 or 3 which have the meanings:
;
;          1  for rename f1 to f2 and 'string' = <f1>/<f2>
;          2 –> TRA 1
;          3 –> TRA 0
;
; If all goes well, on exit D0 = 0, else it contains an error code.  If D0 is not
; 1 to 3 on entry an error is signalled.
;
; The filenames f1 and f2 are stored by the code below in space on stack
as:
;        _____
;       |  L1  |  filename1 |  L2  |  filename2 |
;       <  2  ><  L1 (+) ><  2  ><   L2 (+)  >
;
; The filenames are padded to even so that the number of bytes needed to
; hold them is rounded up to even. The lengths are thus L1 or L1 + 1 and L2
; or L2 + 1.
;
```

```
SMS.PSET    EQU         $33          To set printer translate tables
IOF.RNAM    EQU         $4A          To rename a file

MAXD0       EQU         2            Maximum choices - 1
            DC.B        'pmc0'       For ARCHIVE
            DC.W        BOT-TOP      Length of code for ARCHIVE

TOP         LEA         STACK,A1     Keep stack address . .
            MOVE.L      A7,(A1)        . . in STACK
            SUBQ.L      #1,D0
            BMI         EZ               ----> code in D0 too low
            CMPI.L      #MAXD0,D0
            BGT         EZ               ----> code in D0 too high
            CMPI.B      #1,D0        Other than rename? . .
            BGE         TOP_1          . . yes
            MOVEA.L     A0,A1        Keep pointer to string
            MOVE.B      (A0)+,D1     Length of ARCHIVE string (L)
            BEQ         EZ               ----> no string
            EXT.W       D1           L in D1.W . .
            MOVE.W      D1,D2          . . and D2.W
            ADDQ.W      #6,D2        Add enough for two lengths . .
            BCLR        #0,D2          . . and round
            SUB.W       D2,A7        Get space on stack for filenames
            MOVEA.L     A7,A3        Keep pointer to space
TOP_1       LEA         JTAB,A4
            ADD.L       D0,D0        D0.W = 0, 2 or 4
            ADDA.W      (A4,D0.L),A4
            JMP         (A4)         Jump to appropriate program
;
JTAB
            DC.W        RENAME-JTAB
            DC.W        TRON-JTAB
            DC.W        TROFF-JTAB

;   RENAME


;
RENAME      MOVE.W      D1,D2        D2 = length of ARCHIVE string (L)
            BRA         L2
L1          CMPI.B      #'/',(A0)+
```

```
L2              DBEQ        D1,L1           Look for "/"
                BNE         EZ              ----> "/" not found
                ADDQ.W      #1,D1
                NEG.W       D1
                ADD.W       D2,D1           Length of 1st filename (L1) . .
                MOVE.W      D1,D3            . . to D3.W and D1.W
                MOVEA.L     A3,A0           Pointer to stack space
                MOVE.W      D3,(A0)+        Length of 1st filename (L1)
                LEA         1(A1),A2        Point to start of characters
                BRA         L4
L3              MOVE.B      (A2)+,(A0)+
L4              DBF         D3,L3           Put L1 characters to stack space
                MOVEA.L     A0,A1           For start of 2nd filename
                BTST        #0,D1           Is L1 even? . .
                BEQ         M1              . . yes . .
                ADDQ.L      #1,A1           . . set A1 even if not
M1              MOVEA.L     A1,A0   Position in stack space for 2nd string
                ADDQ.L      #1,A2           Jump past "/" in ARCHIVE string
                MOVE.W      D2,D3           L to D3.W . .
                SUB.W       D1,D3           . . less L1
                SUBQ.W      #1,D3           . . less 1 is 2nd length (L2)
                MOVE.W      D3,(A0)+
                BRA         L6
L5              MOVE.B      (A2)+,(A0)+
L6              DBF         D3,L5           Put L2 characters to stack space
                MOVEA.L     A3,A0           Set A0 -> 1st filename
;
;   Now rename 'FILE1' to 'FILE2'
;
;   A0 -> FILE1
;   A1 -> FILE2
;
                MOVEQ       #0,D3           OPEN 1st filename
                BSR         OPE
                BNE         EZ              ---->
                MOVEQ       #IOF.RNAM,D0
                TRAP        #3              Rename file1 to file2
                TST.L       D0
                BNE         ER2             ---->
                MOVEQ       #IO_CLOSE,D0
                TRAP        #2              Close channel to file
```

```
                MOVE.L      D0,D7        Error code to D7.L
ER              MOVEA.L     STACK,A7     Reset stack
                MOVE.L      D7,D0
                RTS


;
;
; OPE   opens the file at A0
; D3 must be set to the type of OPEN
;
OPE             MOVEQ       #-1,D1       This job
                MOVEQ       #IO_OPEN,D0
                TRAP        #2
                TST.L       D0
                RTS


ER2             MOVE.L      D0,D7
                MOVEQ       #IO_CLOSE,D0
                TRAP        #2
                BRA.S       ER           ---->
;
EZ              MOVEQ       #-7,D7
                BRA         ER           ---->
;
;      TRON -> TRA 1
;
TRON            MOVEQ       #1,D1        Code for ON
                BRA         TR_1
;
;    TROFF -> TRA 0
;
TROFF           MOVEQ       #0,D1        Code for OFF
TR_1            MOVEQ       #SMS.PSET,D0
                TRAP        #1
                MOVEQ       #0,D0
                RTS


;
STACK           DS.L        1
BOT             END
```

RGB to VGA BOARD   Peter Scott

[And a very warm welcome to a new contributor - looks like a real tinkerer! We look forward to more articles from you on topical subjects - Ed]

Lately I've been having a lot of trouble trying to find a suitable monitor for my QL. I've an old CUB that has a lovely picture but fires off lightning bolts and a poor old Sinclair Taxan monitor that arrived looking like it had just rode in on the noon stage. My ears instantly pricked up when I read the discussion in the last issue of QUANTA regarding the RGB to VGA JAMMA board as reviewed on a Spanish site.

I ordered my board, the CGA/EGA/YUV to VGA Arcade HD-Converter PCB (GBS-8220) from www.jammaboards.com for $39.95 plus postage to the UK. The board itself needs a 5 volt power supply with 2 amps minimum. I was lucky that I had a spare adaptor(Hama 46612) off an external floppy drive which was 5 volts at 2.5 amps. A 2 amp supply might be pushed a bit too much if left on a long time. The supply can be hard soldered to a separate input or there is a standard adaptor style socket, the center is positive polarity and the tip I used was 12mm long, 5mm wide with the inner part around 3mm.

Next up for my cable I cut the scart end off a QL Scart cable which was wired as follows, with my cable viewed from the front, the wires were soldered to the supplied 8-pin RGB Cable and then individually insulated with tape:

RGB Socket ->   8-pin Board Cable

RGB Socket	8-pin Board Cable
Green to	Green Video Wire
Orange to	Grey H.Sync Wire
Purple to	Blue Video Wire
Blue to	Red Video Wire
Yellow to	Yellow V.Sync Wire
Brown to	Black Ground Wire

The Wiring connections
(before insulating)

On my first attempt using the pinout in the QL user guide I had somehow mirrored the socket, so the sync wiring was wrong, once fixed, I had a white and green QL setup rather than the usual white and red! If all goes well, the screen will come up and you click the little menu button for

your options which are initially in Chinese but it's easy just to flick through and find the English setting which the board remembers. You can also auto scan by holding down the auto button for 5 seconds and letting go.

The quality is good although a little fizzy around the lettering but this could be down to the sharpness settings and resolution of my old TFT monitor. Overall I was impressed and it's a great alternative to locking horns with old CRT monitors.
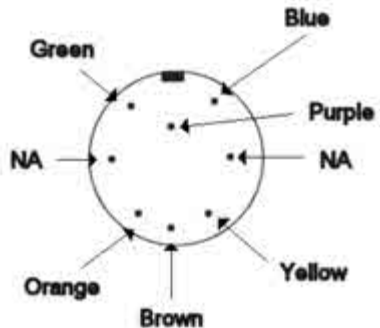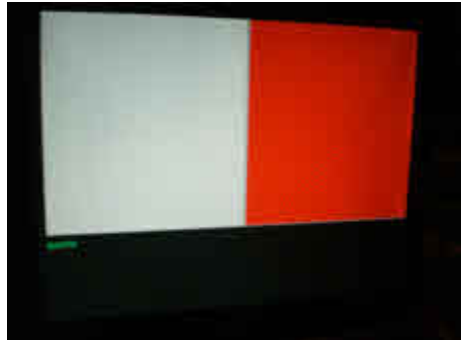
**Just a few of Peter's photos showing:-
The VGA board (Top Left),
The Green/white screen - oops! (Top Right)
The familiar Start-up Screen (Lower Left)
Ah That's better! Red & White (Middle Right)
Socket Pin out (Bottom Right)**

QUANTA HELPLINE   Dilwyn Jones

Zip and Unzip Part 2

USING UNZIP

Now for the fun part, actually using Unzip. In all cases, I'll assume we'll be using it to unpack a file called FLP1_EXAMPLE_ZIP which we have downloaded from the web.

Unzip normally (unless you explicitly tell it otherwise) unpacks files to the DATA_USE default drive. On a floppy disk system, it is usually FLP1_ and on a hard disk system WIN1_, although of course you can set it to just about anything with a DATA_USE command, so if you want to unzip to RAM3_ just issue a DATA_USE RAM3_ command before the Unzip command:

```
100 DATA_USE RAM3_
110 EW FLP1_UNZIP;'FLP1_EXAMPLE_ZIP'
```

Line 100 sets where the unzipping will be sent to, and line 110 starts the unzip program, telling it to unzip FLP1_EXAMPLE_ZIP. Note how the filename is specified as a string after a semi-colon, this is how these option commands are passed to programs like Unzip using EX or EW commands. Note: although some versions of the EXEC and EXEC_W commands have been extended to allow use of these command parameters, it is normally better to use the Toolkit 2 EX and EW versions.

It is possible to explicitly tell the program where to unzip to using a "-d destination" command. Zip has all sorts of these one letter commands available, preceded by a hyphen. -d states which drive/directory to unzip to:

EW FLP1_UNZIP;'-d RAM4_ FLP1_EXAMPLE_ZIP'

This will tell unzip to unpack EXAMPLE_ZIP from FLP1_ to ram4_.

It is also possible to view a list of what files are contained in EXAMPLE_ZIP, using a -l command (l for listing):

EW FLP1_UNZIP;'-l FLP1_EXAMPLE_ZIP'

This is useful if you think you may not need to unpack every file. You can get a list and write down those files you think you'll need and just extract those, by specifying the names after the name of the archive. For example, suppose we only want to extract prog1_bas and prog2_bas files from EXAMPLE_ZIP:

EW FLP1_UNZIP;'-d RAM4_ FLP1_EXAMPLE_ZIP prog1_bas prog2_bas'

Note that these names may need to match the case of those stored inside the archive. If it says they are called prog1_bas and you enter PROG1_BAS it may not work! There may also be problems such as filenames with names clashing with QDOS directory names, for example. Some of these filename clash problems can be hard to diagnose and not always easy to solve, so be aware of this as a possible cause of a mysterious problem you might run into at some stage!

Unzip also supports '*' and '?' wildcard options to selectively extract and process files. * stands for any sequence of characters, and ? stands for any single character. So if you wanted to extract only files ending with _bas (BASIC programs) you could try this:

DATA_USE RAM4_
EW FLP1_UNZIP;'FLP1_EXAMPLE_ZIP *_bas'

Note: you could have used either _bas or .bas, it seems to recognise both.

And if there were several versions of a program, e.g. prog1_bas, prog2_bas, prog3_bas and so on, you could use prog?_bas as a wildcard to extract all of them.

EW FLP1_UNZIP;'FLP1_EXAMPLE_ZIP prog?_bas'

Difficult to grasp at first, but you get used to it after a while.

Normally, if a file already exists, you get a 'yes/no' prompt offering to overwrite it. It is possible to bypass this and overwrite without asking using a -o command to overwrite without asking - useful (if dangerous!) if you know you will need to overwrite a large number of files without having to answer yes or no every time.

As well as specifying which files are to be unzipped, you can also tell it to specifically exclude specified files using a -x command. For example, if you don't want the text files (those ending with _txt) you can use a command like this:

EW FLP1_UNZIP;'FLP1_EXAMPLE_ZIP -x *_txt'

A PROGRAM TO UNZIP

I mentioned you could write a BASIC program to control Unzip. This is a little easier than you might think. Here's an example to extract all files from a specified zip file:

```
100 CLS : CLS #0
110 INPUT #0,'File to unzip > ';ip$
120 INPUT #0,'Unzip to > ';op$
130 INPUT #0,'Where is UNZIP program > ';uz$
140 EW uz$&'unzip';'-d '&op$&' '&ip$
```

ZIPPING FILES

The process of packing files into a single compressed file is called Zipping. Like unzipping, we can put all files from a single place into an archive, or use wildcards or specify a list of files to be included. If an archive already exists, files are added automatically to it, otherwise a new zip file is created from scratch.

EW FLP1_ZIP

entered by itself, this command displays Zip's built in help screen.

Figure 5 - Zip help screen

Q U A N T A

Independent
QL Users Group

To pack files into an archive, use a command like this:

EW FLP1_ZIP;'FLP1_EXAMPLE_ZIP FLP2_*'

This puts all files it can find from FLP2_ into the zip file called FLP1_EXAMPLE_ZIP. If FLP1_ already existed, it added all the files to it, otherwise it created FLP1_EXAMPLE_ZIP and put zipped copies of the files on FLP2_ into it. Note - it does not delete the original files on flp2_, it puts compressed copies of them into the zip file (although there is a -m option to MOVE files into an archive instead!).

You can replace the FLP2_* wildcard with a list if you prefer:

EW FLP1_ZIP;'FLP1_EXAMPLE_ZIP FLP2_BOOT FLP2_MYPROG_BAS'

As with Unzip, you can use -x commands to specifically exclude some files if required.

If you need to, you can delete specified files from an archive, e.g. when you accidentally inserted a file you did not wish to be included:

EX FLP1_ZIP;'FLP1_EXAMPLE_ZIP -d myprog2_bas'

That command deleted myprog2_bas from the archive called FLP1_EXAMPLE_ZIP.

You can include a comment into an archive by using a -z command. This comment is just that - a comment among the list of files, useful for including short copyright notices, for example:

EX FLP1_ZIP;'FLP1_EXAMPLE_ZIP -z'

The -z command causes the zip program to ask you for a comment. It can be more than one line long. Enter each line and press ENTER. Simply enter a full stop on the last line to end the comment. So, using -z you could add a copyright notice including your name and address, ending the comment with a full stop on the last line (that line is not part of the comment):

The zip program prompts with the line:

enter new zip file comment (end with .):

You would then enter the comment:

This program is copyright Fred Bloggs 2006
123 The Street
Anytown
AB12 3CD

.

If the file already contains a comment, it shows you what it was so that you know what you are replacing. To see and test the comment you have just added, use a simple unzip listing:

EX FLP1_UNZIP;'-l FLP1_EXAMPLE_ZIP'

The comment appears before the list of files.

If you are in the habit of using sub-directories, a useful option is a -R command, which causes Zip to recurse into sub-directories, which in simple terms means include files contained in sub-directories as well as the current directory:

EX FLP1_ZIP;'FLP1_EXAMPLE_ZIP -R RAM4_*'

That command tries to add all files in RAM4_ and all sub-directory contents on that drive into FLP1_EXAMPLE_ZIP. Be careful, it is possible to include a huge number of files by mistake. For example,

EX FLP1_ZIP;'FLP1_EXAMPLE_ZIP -R WIN1_*'

would try to add my entire hard disk content into a zip file on FLP1_, some hope!

Zip normally needs to make some temporary files while it is working. By default it will create these on RAM1_ but you can make it create them on another drive with the -b option:

EX FLP1_ZIP;'-b WIN1_ FLP1_EXAMPLE_ZIP RAM2_*'

That command created temporary files on WIN1_ while it tried to add all files from RAM2_ into FLP1_EXAMPLE_ZIP

The commands -1 through to -9 offer a trade off between compression efficiency and speed. -9 maximises compression at the expense of speed (although on modern fast systems it might not make much difference to speed!).

There are all sorts of other options, but I won't over complicate matters here. At first, you'll just be using Zip and Unzip to compress and decompress all files on given drives to or from given zip files. Once you are confident with the simplest use, you can start to explore the more advanced options.

CREATING SELF-EXTRACTING ZIP FILES

There is a program called makesfx which adds some code to the start of a zip file to make it into a self-extracting file. Unfortunately, it is not particularly easy to use or very reliable. If you are still interested, read the QDOS-specific part of the Zip documentation.

In the next part of this article, we'll take a look at Archivers Control Panel and a few other front end systems for Zip and Unzip.

Members wishing to submit helpline requests via email can use the email address helpline@quanta.org.uk or if you prefer to use traditional post, please send the helpline request to me via the address printed inside the front cover of the newsletter.

Obviously, we cannot guarantee to answer every query we receive, but we will do our best! Where we have been unable to answer the queries, we may print the help request as an open request in the Magazine to ask if any of the readers can come up with a solution. And, of course, if readers feel that they have a better solution than we came up with, or would like to correct any errors we make, please write to us!

QUANTA HELPLINE (Part 2)   Dilwyn Jones

USBPrint

This Helpline column is dedicated to a little problem I ran into with my printer. It's connected to the USB port on my PC. I knew QemuLator could print to the parallel port, but I didn't want to crawl under my desk and get stuck in the tangle of wires trying to change printer connections every time I wanted to print from QemuLator. My printer is an Epson Stylus Colour 880, which happens to have both a parallel and USB socket, so could use either port. Actually, the parallel port is connected to the parallel port of the Super Gold Card in my Aurora system alongside and as long as both computers don't try to print at the same time (total chaos would occur if they did!), it forms a convenient printer-sharing solution for the PC and Aurora systems, so I didn't really want to deprive my Aurora of a printer just for the sake of occasional printing from QemuLator.

You may ask, "Why does Dilwyn want to use both QemuLator and QPC2 on his PC?"

Good question! Actually, it's because I have some old QL software which won't run on QPC2. It's handy to have a "QDOS" system to test and run older QL software. QemuLator can also use the Aurora SMSQ/E developed by Marcel Kilgus to use QemuLator in 256 colour mode like the Aurora. The same 256 colour mode drivers were first implemented on QPC2 while Marcel was developing them, so the Aurora 256 colour mode can be used on both emulators and on the Aurora itself.

Being unable to solve the USB printer query myself, I turned yet again to the ql-users email mailing and once again it came up trumps with a number of people offering advice to help me sort out the problem.

My original question was:

"Anyone know if Q-emuLator can print to a printer on a USB port? As far as I can see it seems to be only possible to print to a parallel LPT port on the PC, or in some cases a serial port printer if using the emulation mode."

Daniele Terdina (author of Q-emuLator) kindly came to my rescue with such helpful information that I thought it would be of interest to our members using Q-emuLator. In versions of QemuLator up to about v2.5

only parallel port printers could be used. The printer on my QPC2 system is connected to a USB port on my PC. I am now using the new version 3 of Q-emuLator.

Daniele wrote:

"See the manual (chapter 6), but this is the gist of it:
1) Prerequisite is to have the printer installed under Windows
2) In the QL Configuration window, make sure the serial port you'll use is redirected to the printer (it is by default for SER1 and SER2)
3) In the QL software, print to the SER port. If the QL software allows you to choose a printer, choose an old Epson model.

An easy test is:
OPEN#3,SER:PRINT#3,"HELLO":CLOSE#3

This should print "HELLO" to your PC printer (USB or otherwise)."

What this means is that Daniele has implemented a whole new "virtual printer" system for the latest Q-emuLator, allowing it to work with the currently installed Windows printer. The old method for printing to the parallel port still works, if you are using a parallel port printer.

QPC2 users may be used to the QPCprint software, which allows them to print to Windows-only printers, the modern types that have no control code sets built in. The "virtual printer" system is similar in concept as far as the user is concerned, and works by redirecting serial port output to wherever Windows drives your printer (in my case, a USB port). You don't have to figure out where, which USB port or anything like that.

First you should make sure you have a suitable printer installed in Windows – your existing printer driver should work as long as you can print from Windows software to the printer.

Start QemuLator. It must be version 3 or later, as this is a new facility.

From the "QL" menu (see figure 1) , select the sub-menu called "QL Configuration".
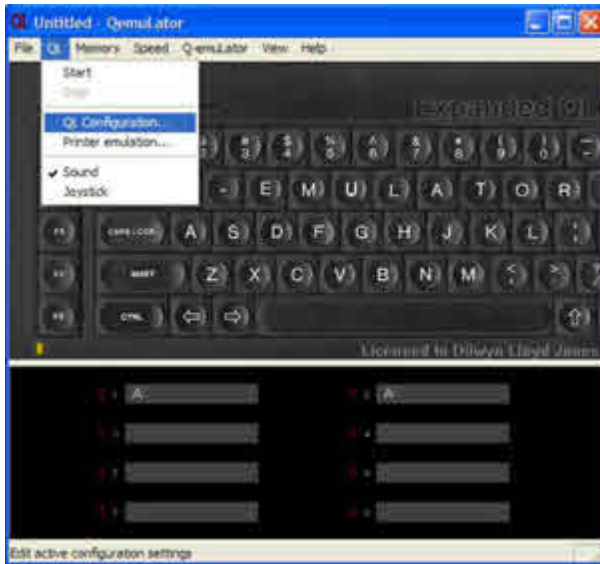
Figure 1

This brings up the menu shown in figure 2. Click on the 'Serial Ports' tab at the top to get to the right page tab.
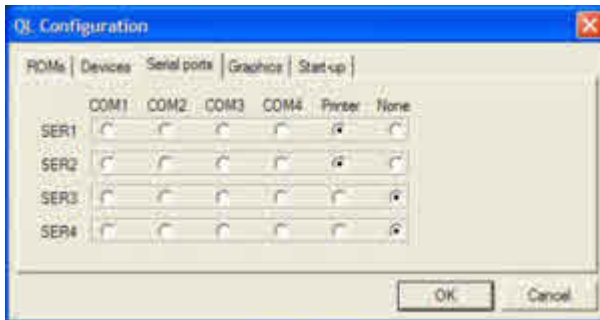
Figure 2

If you have used QemuLator before, you'll be familiar with this menu, where you can tell which QL SER serial port corresponds to which of the PC's COM ports. You can now see that there is an extra option, called simply 'Printer'. Any of the four QL serial ports SER1, SER2, SER3 and SER4 can be assigned to any of the PC's COM ports if you wish to use an external modem for example, or redirected to the current Windows printer via these options. Most QL software expects to be able to print from SER1 or SER2, so to make sure that QL software printing to SER1 or SER2 gets sent to the Windows printer, just click in the white circles under the word 'Printer'. You'll see in figure 2 that I have set both SER1 and SER2 to

'Printer' for my system. I don't use the single 'COM' port on my PC at all, so I have set SER3 and SER4 to 'None' as they are not required.

You may also wish to click on the Devices tab, and make sure there's no tick next to the 'Parallel ports' entry if that port is not to be used.

Now, click on OK and you are done except for one extra option you can choose.

If you return to the 'QL' menu in QemuLator (this also has to be done while the emulator is stopped (i.e. it is showing the QL keyboard picture you get before you start the 'QL' running), you will see that there is now an extra option in this menu called 'Printer emulation…', just under the 'QL configuration…' entry we used earlier. See figure 1.

Clicking on the 'Printer emulation…' item brings up another small menu – see figure 3.
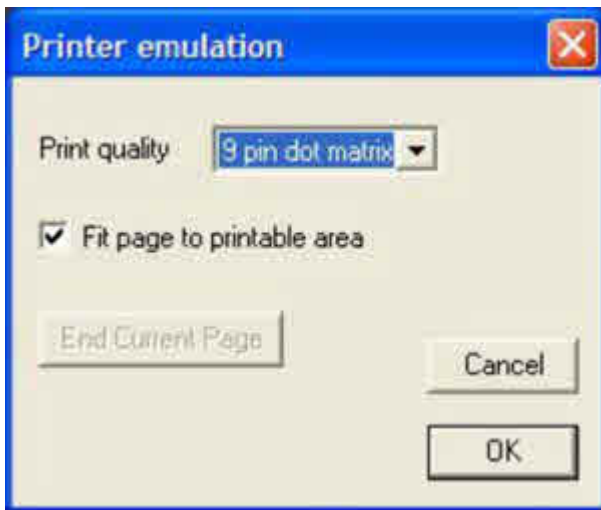
Figure 3 – Printer emulation menu.

This menu contains three options which can be selected. First, there is the 'Print quality.' You can choose either 'High Quality' or '9 pin dot matrix'. As the names imply, these allow to print in high quality, which you might want to use for correspondence quality printing. The other option sets it to print more like an old fashioned 9-pin dot matrix printer. This gives the printout a more 'dotty' feel, ideal for BASIC program listings for example as

it seems to use less ink, with appearance similar to the 'draft' modes on some printer. A nice simple choice of settings.

Under this, there is an option called 'Fit page to printable area.'

If ticked (click in the square white box alongside it to place a tick in the box) it tries to shrink the page being printed to fit into the printable area of the PC printer, which might be handy if your QL program is trying to print a page a little larger than can be fitted within the margins of the page on your Windows printer. Daniele warns in the manual that "this can result in a smaller print, but at least there should be no pieces mssing' and that "if your QL software provides paper margins, you can try unchecking this option to avoid excessive margins."

The third option under this is a button called 'End Current Page.' It is shown greyed out in figure 3. If the virtual printer buffer contains an incomplete page, in other words the last page didn't contain enough text to fill the page, or you had aborted printing before it completed, clicking on this will cause the incomplete page to be "forced" out to the printer. This can be useful when the last page printed from a QL program fails to appear out of some printers.

Once you have chosen your settings, just click on OK and you are ready to go!

The only other thing you may need to do is on the QL side. Make sure if possible that your QL printer driver is set to an Epson compatible printer - Daniele says in his message above, to "*choose an old Epson model*", which I take to mean an older 9-pin dot matrix printer such as an Epson FX80 or similar (you'll see what I mean below after I tried printing graphics). This virtual printing system translates the Epson printer driver output to send to the Windows printer.

In your QL software, you can now print using your normal print setup and the clever emulator takes care of sending the printed output to the USB printer via the Windows printing system automatically.

After a while I realised the "virtual printer" system could handle QL graphics too, at least it can handle Epson-compatible ones. I installed the sdump_rext extensions, then used the commands

```
SDP_DEV 'SER1'
SDP_SET 2,1,1,0
SDUMP
```

These commands specify that printed output should go to QemuLator's SER1 to go to my printer, then set Epson FX80 format screen dumps (2), scale number 1, inverse (swap black/white) and random 0. It worked first time. I tried the FX80 and LQ2500 printers (numbers 2 and 5) with success, but the LQ2500 24 pin printer (number 6) failed to print properly. I then tried the printer number 7, 8-pin colour LQ2500. That printed, but in black and white only. Printer number 8 (another colour dump which I think is 24-pin) failed miserably. Good job I had the Windows Print Preview enabled for my printer – it claimed that it would need 552 pages and stepping through the previewed pages showed about one or two random text character to be printed per page. I guess I won't be trying printer number 8 again unless I want to wallpaper my house!

If you are using QPCprint with QPC2, it also can handle graphics printing.

Before Daniele gave me the "definitive" answer on this one, a couple of others had offered what turned out to be useful extra information, concerning the use of USB printers in general, which may be of use to people trying to use a USB printer with a QL emulator which does not offer the ability to print to a USB printer.

Much of this is probably similar to the problems encountered by DOS users, namely that printing from MSDOS might not work via the Windows system, or might only be able to drive parallel or serial printers. I admit I haven't tested all this, so I offer it in good faith with the usual disclaimer that it hasn't been tested at all!

First, Tobias Fröschle offered some advice on how to redirect or "translate" an unused LPT printer port (PC parallel printer port) to a USB port for printing. In other words, print to an unused parallel port such as LPT3: and it should get redirected to the USB printer instead. Tobias wrote:

"What you could try:

Export your USB printer as network printer.

Go to a terminal session and redirect LPT3 (or whatever your first unavailable LPT: is to that "network enabled" printer with the command:

net use LPT3: \\yourcomputername\usbprintername

Voila, you've got your USB printer on LPT!"

You would need to know the network name of your printer (the full name including the part between the double slash and single slash – the Windows Help system can advise you on how to search for this), I found some information by searching for "redirect port" as well as "net use" (the latter will show you how to use the various options available with NET USE and if you use the NET HELP command in a DOS box you can also get some help on the various NET commands available (NET USE is only one of them) – at this point it all went above my head and I stopped reading!).

Note that the 'net use' before LPT3: in the example must be two separate words with spaces between them, in case you do what I did without thinking and typed it more like a QL command with an underscore by mistake.

Rich Mellor also offered this information:

"QPCPrint can be used to capture the output from any QL emulator, or other program running on the PC - it does this by setting up a virtual printer driver which captures the LPT1 port and then uses the Windows printer processor to send the output to any connected printer. Printfil is something similar - both programs are detailed with links on www.rwapsoftware.co.uk/Printers2.html as an option for emulator users.

The other option is to investigate other options for capturing the LPT1 port and redirecting output - a good guide appears at:
http://geekswithblogs.net/dtotzke/articles/26204.aspx

Read this in conjunction with the step by step guide on the QPCPrint site if you want more details - http://www.kilgus.net/qpcprint/printer.html

There are others out there also - DOS2USB for example (I have never tried this) - but no free solutions unless you follow the examples listed above."

I learned quite a lot from the above articles, and there was a lot there I'll never be clever enough to understand, but it's there for those who want to know about these things.

This article might seem a bit too Windows-orientated for a QL magazine, but as I learned to my cost it pays to know a bit about the underlying Windows systems when you run into problems using QL emulators.

QL MAKEOVER PART 1   Peter Scott

I was recently inspired to carry out this little QL makeover after seeing some excellent photos of Rick Dickinson's designs and prototypes during his time as designer at Sinclair.

The photo that caught my eye the most was a Spectrum + entirely in white, making for a lovely clean and modern design - the kind of style that Apple has made their own now. The site is well worth a look and also has a stunning futuristic QL with wafer drive in red/black colour scheme plus a wafer drive add-on for the standard QL, not to mention prototype 48k Spectrums which never made the cut. The address is:

http://www.flickr.com/photos/9574086@N02/collections/72157608812198325/

The All White Spectrum Plus

Futuristic QL with integrated wafer drive and wafer drive add-on for standard QL.

My spare QL had a faulty membrane so it was a good excuse for pulling it to bits. With the top taken off and membrane removed, the keys were easily removed using a flat bladed screwdriver to lever out the inserts from behind. The glued-in LEDs were gently cracked loose with a small watch screwdriver.

Next up, I sorted out a bucket of warm soapy water and gave all the grot that was under the keys a good scrub with an old toothbrush (use a partners if you're stuck). I then used some P800 grit Wet and Dry sandpaper soaked in soapy water to give the case a light rub over, removing any dirt and also helping the paint to get a good key.

A good scrub with warm soapy water and (partner's?) toothbrush!

The 'New Look, All White,' QL top cover curing and hardening before being reassembled.

I rinsed off the top with water, then gave it a final scrub to remove any last bits of dirt and left it to dry. For the paint, I used some white plastic primer by Hycote, but most automotive-style plastic primers would work well. You then have your choice of top coats. After giving the can a damn good shake, I usually spray by moving the can from left to right quickly from a distance of around 30cms; this helps to stop the paint build up too quickly and run. I usually give 2 coats, with a gap of around half an hour and with the second coat applied from a different angle.

After leaving the paint to cure for at least a few days in the sun (I wish), I give it a few light mistings using a matt spray model varnish, which also needs a few days to cure and harden properly.

On my to-do list for next time: some different coloured LEDs (hopefully blue), possibly painting the keys to match and maybe some EMI shielding paint for inside.

VIRUS ATTACK   Steve Poole

I n a previous article, I discussed machine code. This time I am going to describe a viral attack program, adapted from code which appeared in a french magazine for PCs in December 1984, for transcription to other computers. (This explains the abundance of GOTO's).

The French 'Polytechnic' is a very elite Technical University in Paris. It possessed a mini-computer for educational purposes on which students could write 'service programs' on a time-sharing basis. But some hackers found an original use for their code. They wrote 'rabbit' programs, short sections of code that would simply reproduce themselves in memory until it saturated, crashing the machine. As a result, other hackers wrote 'fox' programs that would hunt memory for rabbits and destroy them. Therefore a war ensued between rabbit-coders and fox-coders, which took so much computing resources that both communities were banned from accessing the processor.

This scenario was used in the epoch-making film 'TRON', where people were trapped in the memory of a huge computer and tried to fight their way out using bugged-code.

If you have tried writing machine code using an assembler, you might have crashed your QL by using badly-written CALLs from Basic. This happens if you incorrectly modify SuperBASIC code or DATA in reserved areas of memory. This accidental behaviour is what virus-writers try to copy to crash the computers of the government agencies of their enemies.

The end result is very slow 'Windows' operation as you need to keep antivirus software scanning your system in permanence, slowing everything down, because of the security defects in Microsoft code. This 'Virus Attack' program uses the principals of foxes and rabbits as sketched out by A.K.Dewdney.

The main program, 'Virus_bas', is a simple Basic Interpreter which, when you run it, allows you to type in a 'rabbit' using an internal nine-word machine-code language, similar to that used in programmable hand-held calculators.

'Virus attack' simulates a virtual computer having but 800 memory addresses, capable of multitasking two programs simultaneously, a rabbit and a fox, by switching from one to the other for each successive instruction. The computer starts each program at a random address, and then instructions are addressed relative to their current position. Therefore code moves as it runs, the aim of the game being to 'bug' the other program which will then crash if it lands on a DAT (NUL) code. So write code to bombard your adversary's memory with DATs, or move your own program to another memory location, whilst trying to locate the other person's code position so as to be able to attack it. Your code can be as long as you wish, using any combinations of instructions and addressing modes. Let your imagination run riot!

The machine language has, as said, but nine instructions, which can take up to two arguments, prefixed by '#' or '@', the former for immediate addressing, and the latter indirect relative addressing, the default being relative addressing. The memory addresses extend from 0 to 799, where they wrap forwards (positive) or backwards (negative values).

Examples:

DAT 5   : Nul instruction used to store a variable.
MOV 5 9 : recopy the content of cell 5 to cell 9.
ADD 3 6 : Add the content of cell 3 to that in cell 6.
SUB 4 8 : Subtract the value of cell 4 from cell 8.
JMP 55 : goto 55
JMZ 9 3 : goto 9 if the value of cell 3 is nil.
JMG 55 1: goto 55 if the content of cell 1 is > nil.
DJZ 22 58: count down the value of cell 58 and goto cell 22 if the result is nil.
CMP 5 48: compare the content of cell 5 to 48 and advance one cell if unequal.

addressing example (59):
57...DAT 5
58...JMP 4
59...ADD @ -2 4 ...value two cells back is 5, 5 cells   down is 3, added to 4 in 59 gives 7 stored in 59.
60...jmp 2
61...JMP 6
62...DAT 3

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The Interpreter verifies the validity of arguments and address modes as you type them in.

Addressing Modes:

	First argument	second argument
DAT	Relative	--------
MOV ADD SUB	rel, immediate	relative
SUB CMP	rel_indirect	rel_ind
JMP	rel, rel_ind	--------
JMZ JMG DJZ	rel, rel_ind	rel,rel_ind

Just run the main program. It will first ask you type in program one instructions, then program two. Terminate each program by just inputting a nul string, (just hitting ENTER). Then it will progressively show the contents of both memory lists as the codes operate, finally stopping when one routine is clobbered, with a message of which won.

Strategies :

The simplest offensive attack is to fill the memory with zeroes. The best defence is to detect the enemy arriving and move away, as of course both rabbit and fox share the same memory ranges. By using different combinations of instructions, more and more complex strategies can be built up and tried. It is best to play against another player...

As an example, the simplest routine is just one instruction MOV 0 1 which advances through memory copying itself progressively as it does so, like a steamroller.

This main program does not teach you how to write viruses in view to disseminating them on the QL or QPC systems, (which would be essentially illegal). But it will teach you how both assemblers and interpreters work, and show you how some anti-viruses operate by identifying virus signatures, then eliminating them by overwriting them with zeroes.

Perhaps the Editor could publish the best examples of your code lists. This domain is still one being actively researched, and you may come across an important new strategy. You will need to plan out your strategies well before attempting to implement them. This article should get you writing

code again, as it is a very absorbing program that can never be fully exploited, as there are so many combinations possible.

You may wonder why there are fewer virus attacks on computers these days. This is simply because rather than crashing systems, pirates now prefer to write spyware, as this is more lucrative when you gain the technical secrets and client data of your adversaries. And spyware uses the same sort of code as older viruses and the same sort of anti-virus code is used to destroy it.

So I was very pleased when I stumbled on the original article after all these years, as it is still as pertinent today as it was when it first appeared. I have got rid of the GOSUBs and many of the GOTOs, and restructured the code to make it more comprehensible than in its original form.

If you find any bugs, please let the Editor know, as at the moment I don't have a beta-tester, as Bruno Coativy is now heavily involved in other things. Thanks for all your help in the past, Bruno!

Happy Ferreting,

```
100 ::
110 REMark VIRUS_BAS BY S.POOLE, V7apr2009. BETA-TEST BY
B.COATIVY
120 :
130 CLEAR: RESTORE : OPEN#1,con_64: WINDOW 512,256,0,0: CLS
140 DATA 'DAT', 'MOV', 'ADD', 'SUB', 'JMP', 'JMZ', 'JMS', 'DJZ',
'CMP'
150   DATA 'INVALID MNEMONIC','MISSING ARGUMENT', 'ILLEGAL
ARGUMENT'
160   DATA '#',' ','@'
170   :
180   INITIALISE: GET_PROGRAMS: WMON: STOP
190   :
200 DEFine PROCedure INITIALISE
210    REMark  ME%=MEMORY:  PC=PROGRAM:  IN$=INSTRUCTIONS:
ER$=ERRORS: P1% & P2%= CODES
220  DIM ME%(800,3), PC(2), in$(9,3), ER$(3,16), P1%(100,3),
P2%(100,3), C$(3,1)
230  FOR i=0 TO 8: READ in$(i)
240   FOR i=1 TO 3: READ ER$(i)
250    FOR i=0 TO 2: READ C$(i)
260     CSIZE 3,1: PRINT 'VIRAL ATTACK': CSIZE 0,0
```

```
270         PRINT 'Instructions : MOV ADD SUB JMP JMZ JMG DJZ CMP
DAT'
280 END DEFine
290 :
300 DEFine FuNction MODs(x)
310  RETurn INT(x-800*INT(x/800))
320 END DEFine
330 :
340 DEFine PROCedure GET_PROGRAMS
350  PRINT 'Program 1': L1=0
360  INPUT'>'!i$: IF i$='': GO TO 400
370  GET_INSTRUCTION
380  IF fb<>0: PRINT ER$(fb): GO TO 360
390  L1=L1+1: P1%(L1,1)=ic: P1%(L1,2)=aa: P1%(L1,3)=ab: GO TO
360
400  IF L1=0: GO TO 350
410  :
420  PRINT 'Program 2': L2=0
430  INPUT'>'!i$: IF i$='': GO TO 470
440  GET_INSTRUCTION
450  IF fb<>0: PRINT ER$(fb): GO TO 430
460  L2=L2+1: P2%(L2,1)=ic: P2%(L2,2)=aa: P2%(L2,3)=ab: GO TO
430
470  IF L2=0: GO TO 420
480  PUT_BOTH_IN_MEMORY
490 END DEFine
500  ::
510 DEFine PROCedure PUT_BOTH_IN_MEMORY
520  PRINT: PRINT: PC(1)=INT(RND(1)*700): PC(2)=INT(RND(1)*700)
530  FOR i=1 TO L1: FOR j=1 TO 3: ME%(PC(1)+i-1,j)=P1%(i,j): END
FOR j: END FOR i
540  FOR i=1 TO L2: FOR j=1 TO 3: ME%(PC(2)+i-1,j)=P2%(i,j): END
FOR j: END FOR i
550  FOR i=1 TO 2: PRINT i!'BEGIN AT ';PC(i),: END FOR i: PRINT
560  :
570  REPeat LOOP
580     pj=1: f2=0: EXEC_INSTRUCTION: PC(pj)=MODs(PC(pj)+1)
590     IF f2=0: GO TO 620
600     PRINT 'ANOTHER? Y/N'!: r$=INKEY$(#1,-1)
610     IF i$ INSTR 'Yy': RUN: ELSE RETurn
620     pj=2: f2=0: EXEC_INSTRUCTION: PC(pj)=MODs(PC(pj)+1): IF
f2<>0: GO TO 600
630  END REPeat LOOP
640 END DEFine
650 :
660 DEFine PROCedure EXEC_INSTRUCTION
670     ic=ME%(PC(pj),1):  PRINT  TO  (1+19*(pj-1));PC(pj);'>
';in$(ic);' ';
680  c1=INT(ME%(PC(pj),2)/10000): aa=ME%(PC(pj),2)-c1*10000
```

```
690  c2=INT(ME%(PC(pj),3)/10000): ab=ME%(PC(pj),3)-c2*10000
700  PRINT C$(c1);aa;' ';C$(c2);ab
710  SELect ic
720     =0: PRINT:PRINT'PROGRAM'!pj!'LOST': f2=1: RETurn
730     =1: EXEC_MOV
740     =2: EXEC_ADD
750     =3: EXEC_SUB
760     =4: EXEC_JMP
770     =5: EXEC_JMZ
780     =6: EXEC_JMG
790     =7: EXEC_DJZ
800     =8: EXEC_CMP
810  END SELect
820 END DEFine
830 :
840 DEFine PROCedure EXEC_MOV
850  cc=c2: a=ab: INTERPRET: ab=a
860  IF c1=0 THEN
870     ME%(ab,1)=0: ME%(ab,2)=0: ME%(ab,3)=aa: RETurn
880     ELSE cc=c1: a=aa: INTERPRET
890  END IF
900  FOR i=1 TO 3: ME%(ab,i)=ME%(a,i)
910 END DEFine
920 :
930 DEFine PROCedure EXEC_ADD
940  cc=c2: a=ab: INTERPRET: ab=a
950  IF ME%(ab,1)<>0: f2=f1: PRINT 'DAT seulement': RETurn
960  IF c1=0: ME%(ab,3)=ME%(ab,3)+aa: RETurn
970  cc=c1: a=aa: INTERPRET
980  ME%(ab,3)=MODs(ME%(ab,3)+ME%(a,3))
990 END DEFine
1000 :
1010 DEFine PROCedure EXEC_SUB
1020  cc=c2: a=ab: INTERPRET: ab=a
1030  IF ME%(ab,1)<>0: f2=1: PRINT 'DAT SEULEMENT': RETurn
1040  IF c1=0: ME%(ab,3)=ME%(ab,3)-aa: RETurn
1050  cc=c1: a=aa: INTERPRET
1060  ME%(ab,3)=MODs(ME%(ab,3)-ME%(a,3))
1070 END DEFine
1080 :
1090 DEFine PROCedure EXEC_JMP
1100  cc=c1: a=aa: INTERPRET: PC(pj)=MODs(a-1)
1110 END DEFine
1120 :
1130 DEFine PROCedure EXEC_JMZ
1140  cc=c2: a=ab: INTERPRET: IF ME%(a,1)<>0: f2=1: PRINT 'DAT
SEULEMENT': RETurn
1150  IF ME%(a,3)<>0: RETurn : ELSE EXEC_JMP
1160 END DEFine
```

```
1170 :
1180 DEFine PROCedure EXEC_JMG
1190  cc=c2: a=ab: INTERPRET: IF ME%(a,1)<>0: f2=1: PRINT 'DAT
SEULEMENT': RETurn
1200  IF ME%(a,3)<=0: RETurn : ELSE EXEC_JMP
1210 END DEFine
1220 :
1230 DEFine PROCedure EXEC_DJZ
1240  cc=c2: a=ab: INTERPRET: IF ME%(a,1)<>0: f2=1: PRINT 'DAT
SEULEMENT': RETurn
1250  ME%(a,3)=MODs(ME%(a,3)-1): IF ME%(a,3)<>0: RETurn : ELSE
EXEC_JMP
1260 END DEFine
1270 :
1280 DEFine PROCedure EXEC_CMP
1290  cc=c2: a=ab: INTERPRET: ab=a
1300  IF c1=0 THEN
1310         IF  ME%(ab,1)<>0  OR  aa<>ME%(ab,3):
PC(pj)=MODs(PC(pj)+1): ELSE RETurn
1320  END IF : cc=c1: a=aa: INTERPRET
1330  :
1340    IF  ME%(a,1)<>ME%(ab,1)  OR  ME%(a,2)<>ME%(ab,2)  OR
ME%(a,3)<>ME%(ab,3) THEN
1350     PC(pj)=MODs(PC(pj)+1)
1360  END IF
1370 END DEFine
1380 :
1390 DEFine PROCedure INTERPRET
1400  IF cc=0: RETurn
1410  a=MODs(PC(pj)+a): IF cc=1: RETurn
1420  IF ME%(a,1)<>0: PRINT'INVALID REFERENCE': f2=1: RETurn
1430  a=MODs(ME%(a,3)+a)
1440 END DEFine
1450 :
1460 DEFine PROCedure GET_INSTRUCTION
1470  ic=10: fb=0
1480  FOR IB=1 TO 8: IF in$(IB)=LEFT$(i$,3): ic=IB
1490  IF ic=10: fb=1: RETurn
1500  IB=4: GET_ARGUMENTS
1510  IF fb<>0 OR ic=0: RETurn
1520  :
1530  SELect ON ic
1540     =1 TO 3,8: GET_MOV_ADD_SUB_CMP
1550     =4       : GET_JMP
1560     =5 TO 7  : GET_JMZ_JMB_DJZ
1570  END SELect
1580 END DEFine
1590 :
```

```
1600 REMark GET_DAT IF CD=2: fb=3: RETurn : ELSE aa=0: ab=R:
RETurn
1610  :
1620 DEFine PROCedure GET_MOV_ADD_SUB_CMP
1630  aa=CD*10000+AR: GET_ARGUMENTS: IF fb<>0: RETurn : ELSE
ab=10000*CD+AR
1640 END DEFine
1650 :
1660 DEFine PROCedure GET_JMP
1670  IF CD=0: fb=3: RETurn : ELSE aa=10000*CD+AR: ab=0
1680 END DEFine
1690 :
1700 DEFine PROCedure GET_JMZ_JMB_DJZ
1710  IF CD=0: fb=3: RETurn
1720  aa=10000*CD+AR: GET_ARGUMENTS: IF fb<>0: RETurn
1730  IF CD=0: fb=3: RETurn : ELSE ab=10000*CD+AR
1740 END DEFine
1750 :
1760 DEFine PROCedure GET_ARGUMENTS
1770  IF IB>LEN(i$): fb=2: RETurn
1780  IF MID$(i$,IB,1)=' ': IB=IB+1: GO TO 1770
1790  CD=1: IF MID$(i$,IB,1)='@': CD=2
1800  IF MID$(i$,IB,1)='#': CD=0
1810  IF CD<>1: IB=IB+1: END IF : T$=''
1820  IF IB>LEN(i$): GO TO 1850
1830  IF MID$(i$,IB,1)=' ': GO TO 1850
1840  T$=T$&MID$(i$,IB,1): IB=IB+1: GO TO 1820
1850  AR=MODs(T$)
1860 END DEFine
1870 :
1880 DATA 'DAT','MOV','ADD','SUB','JMP','JMZ','JMS','DJZ','CMP'
1890 DATA 'INVALID MNEMONIQUE','MISSING ARGUMENT', 'ILLEGAL
ARGUMENT'
1900 DATA '#',' ','@'
1910 :
1920 DEFine FuNction LEFT$(L$,CHR)
1930  RETurn L$(1 TO CHR)
1940 END DEFine
1950 :
1960 DEFine FuNction MID$(M$,CHR,LG)
1970  RETurn M$(CHR+LG-1)
1980 END DEFine
1990 :
2000 DEFine FuNction RIGHT$(r$,CHR)
2010  RETurn r$(CHR TO LEN (r$))
2020 END DEFine
2030 ::
```

End of Listing.

QUANTA NEWS   Dilwyn Jones

QL Forum

Peter Scott from County Durham has set up a brand new QL Forum, which can be seen at http://www.qlforum.co.uk

The idea behind the forum is that QL users - whether it be users of traditional Sinclair QLs, compatibles, emulators, or whatever - can use it as, well, a forum to discuss anything and everything about the QL (as long as it's legal, decent and so on). The forum has several discussion areas, for hardware, software, emulators, help for new users and an area where you can place wanted or for sale adverts, and links to other QL sites and traders. There's even an area for off-topic chats among QLers!

To join the QL Forum, you need to go to the home page at http://www.qlforum.co.uk/ and click on the Register link. You can read some postings without registering, but you need to register to be able to place messages.

Peter also goes by the pseudonym "Peet van Peebles" (don't ask…). I asked him to provide QUANTA with a little bit of text about himself and how the QL Forum came about. Here's his response:

"I've been a big Sinclair fan since playing on my uncle's Speccy 48k as a young child in the 80s. I'm also a massive fan of video games since then and up to the current day not to mention working with computers as a full time job.

"Around 4 to 5 years ago I got a QL during the course of collecting Sinclair computers, and I had intentions of using it as a hobby machine but for various reasons (or maybe distractions) it got stashed away in my cupboard. A few months back I had the urge to dig the QL out of storage and give it a proper go as a hobby machine.

"It's a pretty unique machine as far as retro computers go which was appealing. I'm hoping to see what games it has to offer plus do a little programming and adventure writing which I haven't done for years.

"The idea for a forum came about when searching around Google for QL information and I couldn't see a forum anywhere. I'm a heavy user of

forums for various hobbies such as working on cars, watching ice hockey, video games and even restoring a Sinclair C5 (see below). I find them pretty much invaluable from technical and how-to topics to just having a quick response community for general chat.

"Hopefully over time the forum will be a place for QL fans of all abilities and areas of the QL community to come together to chat about the QL. The forum also provides a facility for QL Companies and Clubs to showcase their services.

"I'd also like to thank my friend Rob Heaton, another big retro fan and new QL user who I know from the Acorn 32-bit scene. Rob has provided the online hosting and behind the scenes administration."
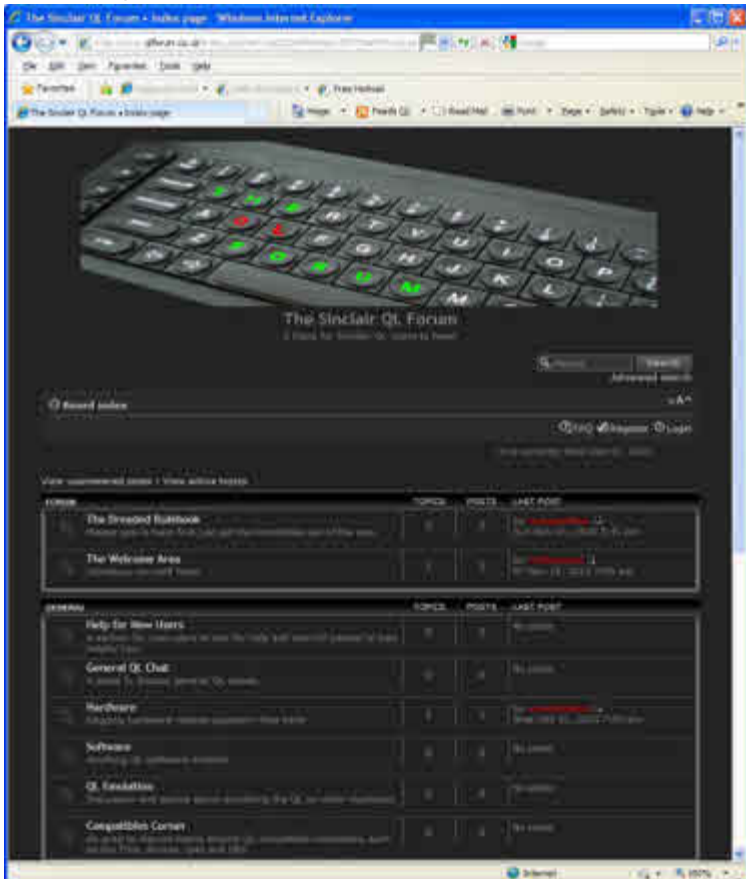
Screen dump of the home page of the QL Forum.

Peter Scott tries his C5 for size.

Puzzle

"Puzzle" is a computer version of the well-known sliding block puzzle we probably all had as a child. The program displays a 3x3, 4x4, 5x5 or 6x6 grid of letters or numbers, with one blank square. The aim is to get all the characters in order with the blank square at the bottom right. Just click on the square to move and it will slide into the blank square next to it. Keep doing this until you've got them all into order. Not as easy as it sounds!

Puzzle is freeware. It needs pointer environment and Window Manager 2 (which means either run it on SMSQ/E version 3.00 or later, or on QDOS with pointer environment version 2.00 or later). It is available to download from http://www.dilwyn.me.uk/games/index.html
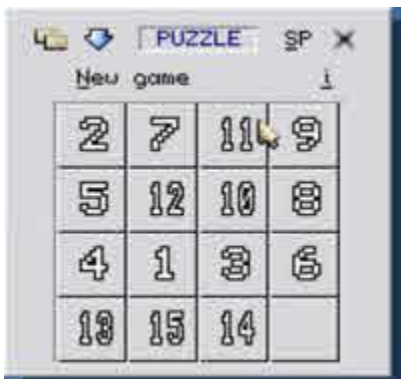
A couple of screens from the Puzzle game

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Wordsearch

Wordsearch generates word-puzzles where you have to find a number of hidden words, just like those puzzles you get in magazines. Using its 11,000 word dictionary, Wordsearch creates a grid of hidden words which you have to locate. It can print out the puzzle itself of course (can print a number of copies if you want to set up a competition between friends and family members for example), plus a solution sheet telling you where all the words are hidden if you really need the solution!

Words can be hidden horizontally, vertically, diagonally and even backward… just like those fiendish word puzzles you get in magazines but without the cost of buying the magazine! Puzzles can be a basic 4x4 grid, or up to 16x16.

If the 11,000 word dictionary isn't to your liking, instructions are included on how to build or adapt a different word list. A BASIC program is included to adapt and organise some of the word lists available from my website or on the Wordbox CD for example.

Be prepared to lose a lot of your time with this fiendish little game. Available to download as freeware from

http://www.dilwyn.me.uk/games/index.html

Wordsearch after setting up a 16 x 16 puzzle

Wordsearch show the solution to an 8 x 8 puzzle

BEEPer

BEEPer is a simple little pointer driven utility to help you experiment with BEEP parameters to get the BEEP sound effect you want for your program. The QL BEEP command might not be the most advanced sound generator ever, but you can still produce some interesting sounds if you are prepared to play around with the various parameters a little, which is where this little utility comes in.

Use the PLAY button to hear the sound, then once you've got the sound you wanted, the relevant BEEP command can be copied to the Stuffer Buffer (retrieve from BASIC with an ALT-SPACE keypress) or even to the SCRAP system if you are in the habit of using QD to edit your BASIC programs, for example. Ready made BEEP commands to avoid typing them into BASIC – simply enter the BASIC editor and use ALT-Space to "stuff" the BEEP command into your program to save having to manually type in the command.

BEEPer is pointer driven and needs Window Manager 2. It's available to download as freeware from

http://www.dilwyn.me.uk/sound/index.html

The BEEPer program

MARQUEE

This is just a simple little text scroller, like those noticeboard displays you get in shops. Written originally just for my own use,

I happened to show it to someone and they said I should make it available to others.

While notionally just used as an animated advertising display, it can be used for any application where a scrolling text display is needed, such as an Information Point display. You can configure the window size, text size and scrolling speed to get the display you want. Can be used as a simple information display alongside other programs. since it doesn't need much space on the screen. You can tell it to use a custom QL font, and whether or not to use proportionally spaced text.

The text can be stored in a file or passed directly to the program, and it has some simple built in examples, such as scrolling the date/time across the display and a countdown of the number of days to Christmas!

Available to download as freeware from

http://www.dilwyn.me.uk/misc/index.html

Marquee using large text to display a message.

Marquee using smaller text to display a longer message, and showing the options menu.

Hangman

A quick and simple game to play Hangman on a computer. Supplied with a word list containing many thousands of words, the program lets you specify word lengths to use and keeps track of how many games have been played along with the number of games you won (just to humiliate you!).

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It has a "play against the clock" mode, which introduces another difficulty element by reducing or lengthening the time allowed to play a game depending on how well you play. Lose a few games and it will assume it is not giving you enough time and give you more time to solve some puzzles until you start winning again, by which time it will once more reduce the time available to try to match your skill level.

Beware – this program knows some pretty fiendish words!

You can add your own wordlist or add to the one supplied – instructions in the manual.

Hangman is a freeware program, which may be downloaded from the Games page on my website

http://www.dilwyn.me.uk/games/index.html

The Hangman program.

QXL Status

A simple pointer driven program to list and alter the 8 QXL.WIN and DOS devices on QPC2. When you start the program it lists the settings of the 8 WIN drives and 8 DOS drives. If you need to change any of them, just click on the current setting and type in the new path name. A simple program to fulfil a simple need. Pointer driven and needs Window Manager 2.
A freeware program which may be downloaded from:

http://www.dilwyn.me.uk/files/index.html

The current issue 2 is out NOW! (middle of December) You can still subscribe and get issues 1 and 2 in one go! The Future of QL Today www.QLToday.com

www.QLToday.com

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The QXL.WIN status program in action.

QLay/QL2K Articles

With grateful thanks to David Denham, I've added his QLay article from QL Today (which includes information on how to use the QLAYT and QLtoolsq programs) and my follow up look at QL2K. These articles should help give prospective QLay and QL2K emulator users an insight into what they are about and above all some examples on how to use the rather difficult (at first) to use disk and file transfer tools those emulators require as they have no floppy disk (FLP) device drivers.

Download the articles from:

http://www.dilwyn.me.uk/docs/qlay/index.html

Easyptr Articles

I have restored the Easyptr articles page on my website, which had been deleted in error some months ago when the website was redesigned. Seems like nobody noticed, but at least the page is now back. It contains useful articles about the use of the Easyptr package, including Norman Dunbar's Easyptr Tutorial package, and my articles from QL Today about using the more recent version 4 of the Easyptr software, including such topics as the use of the new colours, Window Manager 2 and scalable menus. Plus a review of the Q-CoCo package which helps you develop colour themes for the new Window Manager to make maximum use of the new colours and themes available on modern SMSQ/E systems such as QXL, QPC, Q40 and Aurora. The page is at

http://www.dilwyn.me.uk/docs/easyptr/index.html

Keyboard Membranes

With his stock of replacement QL keyboard membranes running quite low, Rich Mellor of RWAP Software has approached QUANTA with a business plan and a request for a loan to facilitate purchasing a new batch of replacement keyboard membranes (together

with tooling up costs etc). He also hopes to get the keyboard membranes made in the U.K.

A replacement keyboard membrane is an essential spare part for a QL. After all, a QL with a broken keyboard membrane is not exactly much use if you can't type anything in (unless you invest in a replacement keyboard interface to attach a PC keyboard, for example)!

QUANTA committee has approved the loan of £1,635 to Rich Mellor, which is repayable within two years, in order to facilitate the production of these essential spare parts.

The QL keyboard membrane, shown at the top of the picture.

OOPS!

Thanks to Peter Scott for pointing out a silly mistake in my Zip/Unzip articles in the Helpline column in the last issue. On page 55 there was a short listing showing how to restore a copy of Unzip after it had been "processed" by Windows or other operating systems. Unfortunately, a typo caused two characters to go missing in line 100 which prevented it from working properly. Line 100 should have been typed like this:

100 fl=FLEN(\"flp2_unzip")

 i.e. there should have been a backslash after the FLEN function's open bracket, so that the function worked directly on the filename rather than interpreting it as a variable holding a channel number. The upshot was that using it as published resulted in a 'channel not open' error message at line 100.

LIBRARY CORNER   Dilwyn Jones

Ordering Programs From The Library

For a full guide to ordering programs from the QUANTA Library, please refer to Section C of your QUANTA Member's Guide.

A list of the programs in the library is contained in the Library Guide, which is already available to download from the QUANTA website at the URL

http://www.quanta.org.uk/index.php?id=44

If you only want to order a small number of disks from the Library, and are able to accept them as zipped files over emails, it is actually easier and cheaper for me to send them over the email system to you. It saves the cost of postage (especially for members abroad) and means you get the disks sooner than through the post. The only delay will be while I check with the membership secretary to confirm you are a member.

Obviously, if you want many disks, it may become more practical for you to contact me first to check – in other words, revert to Plan A by reading Section C of your Member's Guide.

In time, when we have completed work on the Members Area of the QUANTA website, it will be possible for members to download disks directly from the website, but until then, sending disks as email attachments might be the best way forward for most members, especially those abroad. The downside of sending programs as email attachments, of course, is that they usually have to be sent as zipped files and you need to know how to

(a)   save attachments from your email system,
(b)   know how to copy them to the QL or emulator,
(c)   know how to handle the zipped files and unzip them on the QL

As luck would have it, we currently have a series covering this very topic in QUANTA magazine!

MD05 – Vector Text and 3D Perspectives Demo Disk

Library disk MD05 has recently been updated to include Steve Poole's Vector Text and 3D Perspectives demo programs. This includes examples of outline font drawings, spinning and rotating text, drawing text onto a 3D surface, perspective views etc, including some of Steve's original demo programs sent to QL World magazine for publication. There are also programs which seek to create animation via the redefinition of the QL character set to act as simple sprites.

Some of these programs will only run on a QL in mode 4 or mode 8 512x256 screens, with the system variables at the original QL system variable addresses. Some of the programs were written long before this became an issue!

If you are using QPC2 for example, you should be able to run the programs by making sure QPC2 boots up in 4 or 8 colour mode, with 512x256 pixel screen size selected. It is not likely to work if you simply set QPC2 to these modes AFTER it has booted up, e.g. using DISP_SIZE or DISP_COLOUR commands. But you may find it easier if you have a QDOS system, in view of the age of some of these programs, to run it first on a QDOS system. The programs will run OK on a QDOS system, while a few changes may be necessary for some of the programs to run on an SMSQ/E systems. Nonetheless, breaking into the programs and studying the code Steve has used for some of these programs should prove quite instructive.

Some of the programs chain each other, running as a sequence of separate stand alone BASIC programs. You can look at the listings of all of them either by manually loading them or breaking into them while they are running, to study the programming techniques used. Some of the programs require some time to set up 3D views etc on an original QL, but run at respectable speeds on more modern systems.

Please note one particular thing: the disk contains a number of _doc files (the programs also contain information in REM statements within the programs themselves), but some of these have rather long filenames. While QL Xchange Quill can load these files, standard stand-alone Quill won't load documents with long filenames, so you may have to rename the _doc files to have sorter (8_3) filenames.

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One or two of the programs, such as QL_3D_bas and village_bas, need the PEEK$ extension. This is an extension present in SBASIC in SMSQ/E and there is also an equivalent extension in Turbo Toolkit, and a broadly equivalent PEEK_STRING extension in DJToolkit. If you notice that you get an error message such as "overflow" when trying to run these programs, I have included a small PEEK$ extension on the disk which can be loaded if your system does not include a PEEK$ extension. Just LRESPR the file called PEEKSTR_cde before running the programs.

I have added a README_txt file to this disk – please make sure you view this first. It explains what each program is, and contains some supplementary information which may be useful to know before you try running the programs.

Here are a few pictures of the demo programs as seen running on QemuLator:

One of the demos, showing text in a 3D perspective view

An animated view of houses and fields as seen from a helicopter (this is the program called VILLAGE_BAS).

A program running a 3D animation view of the word 'QL'.

QL SCREEN AREA   Dilwyn Jones

B ack in the 1980s we were limited to a simple 512x256 screen. Then along came Atari emulators, Thors, Aurora and we got used to a few more pixels on screen. Nowadays it's getting ridiculous! The monitor I use at the moment is a 1920x1080 pixel monster. I hadn't realised QPC2 could fill this display - as you will see from the screen dump below. I don't know what is the maximum resolution QPC2 can display - maybe we can persuade Marcel to tell us! Or, more likely, QPC2's maximum probably depends more on what the PC's graphics card can do.
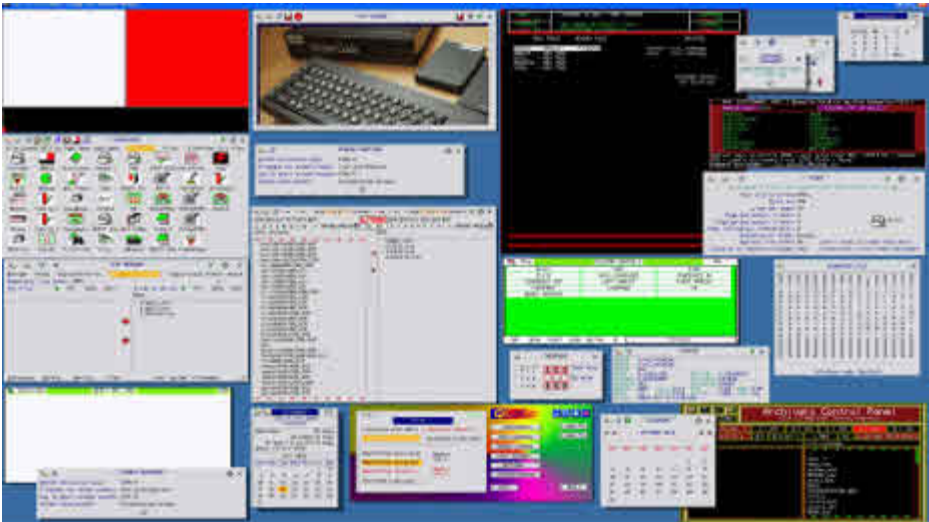

Figure 1 – Who can count how many programs I had running at once here?

To access all these fantastic screen sizes in QPC2, all you have to do is either:

1. Use a DISP_SIZE x,y command (e.g. DISP_SIZE 1920,1080).

2. Set the size in the QPC2 configuration dialogue at startup. If this doesn't appear when you start QPC2, just hold down the SHIFT key as it starts to force it to be displayed.
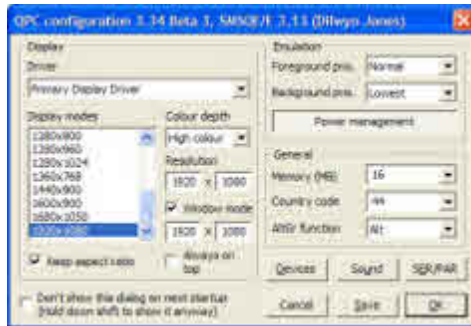
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Figure 2 – QPC2 startup dialogue box

You can see from figure 2 that it shows a few pre-defined range of screen sizes in the "Display modes" window (just click on one of these to select them), and you can manually type new horizontal and vertical sizes into the "Resolution" boxes. QPC2 can either appear in a window on the PC display (i.e. part of the PC screen, with the usual title bar, X icon and so on) or can occupy the full screen like the original QL display. If you make it fill the whole display and not in a window, it gives the QL pretty exclusive use of the display, at the cost of interfering with some of the Windows pop-ups from the Windows Notification Area, which some call the System Tray, for example. It's up to you whether you use Window mode or full-screen mode, although I almost always use Window mode so I can flit back and forth between QL and Windows all the time.

The advantage of using a large QL display is that you can have a lot of programs on screen at one time, although this can quickly become cluttered as you'll see from my screen dump of figure 1 (OK, this is a bit of an extreme example!), but it does give you that extra bit of space when playing with graphics or simply doing tasks that need more than one program open at a time.

QPC2 is able to work in 3 different colour depth modes in these high resolutions. It can emulate the original QL mode 4, but in higher resolutions. It can use what's called 8-bit colour mode (which is like the 256 colour display of the Aurora, but with a greater choice of screen sizes) and of course it can work in 16-bit high colour. For me, that's the everyday mode, unless I'm working with a program which will only run in mode 4 of course. And using the BGIMAGE command, I can give the QL some fantastic background picture displays using photos I've converted from the PC either using my BMP program, or Dave Westbury's Photon JPG viewer, or even Roberto Porro's Photo-QL package, all available from the graphics page on my website.

* In the next issue I'll delve further into the QL's graphics capabilities and discuss some useful extra facilities Marcel has built into QPC2 to maintain compatibility with older QL programs.

QUANTA A.G.M. & QL WORKSHOP 2011

John Gilpin

As usual, in volume 27 Issue 4 August / September 2010 QUANTA Magazine, Committee sent out its invitation for individual members or Subgroups to host the 2011 Annual General Meeting.

Also as usual, not one of our almost 200 members made any effort to offer to host this event and Committee have therefore taken the view that the Membership as a whole must be prepared to accept the choice of date and venue that they (the Committee) have chosen.

Looking at the past couple of years when Committee has chosen venues in the Midlands in the hopes that most members will be prepared to travel to a central location, we must also consider the expense of arranging such events incurred by the committee expenses in travelling to the midlands area to identify and inspect possible venues regarding their suitability to hold such an event etc.

This year, as in previous years, Committee decided to hold the A.G.M. and its associated workshop, locally in Manchester and NEMQLUG - the local QUANTA subgroup have been asked to make the necessary arrangements on QUANTA's behalf.

NEMQLUG have come up with their usual arrangement which, in the past, has served us quite adequately, and it is confirmed that the QUANTA A.G.M. and workshop will be held at "The Endeavour", 3rd Davyhulme Scout Headquarters, off Conway Road, Davyhulme, Manchester. M41 0TF. Local hotels and B & Bs are happy to cater for our needs as is the Pond Quay Restaurant, 15, Croftsbank Road, Urmston M41 0TZ for our usual Chinese Banquet on the Saturday evening.

Further details can be found within this issue of the magazine and full details will be published in the next issue Feb/March 2011.

We hope that as many QUANTA Members as possible will attend this event and show support for the QL User Group that has stood you in good stead for so many years. Please put the dates in your diaries or on Dilwyn's QaLander 2011 (now available) - April 16th./17th. 2011.

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Tis the Season to be Merry,
Tra la la,la la,
La la,
La la.

QUANTA
Wishes all it's Members,
Their Families and Friends,
A VERY MERRY CHRISTMAS
And
A Happy and Prosperous New Year 2011.

SUBGROUP MEETINGS

THE WEST MIDLANDS QL USER GROUP

There has been a change of venue, brought about by the owners of the Queens Head pub changing it from a straight pub into an eatery. The new meeting place is called the Bull, the address is 1 Price Street, Birmingham, B4 6JU. Approx 7 minutes walk from Snow Hill main-line railway station and has ample street parking nearby. Meetings remain open to QUANTA members and non-members alike.

After your first meeting you're expected to pay £1 each time towards the organisation and monthly newsletter costs - except once a year when the group pays all those who attend a pound instead ;-)

We provide food twice a year for those who attend the AGM and the group's birthday party) and at meetings we discuss all sorts of things, QL-related and otherwise, usually from about 8:20pm onwards till 10:30 or later. The group owns QL hardware, a disk library and subscribes to relevant magazines. People can join the mailing list for £3.50 per year, even if they can't attend regularly.

Meetings : Meetings are usually on the first and third Monday of each month (but not on bank holidays unless the previous one was cancelled for that reason).

Contact : The contact number remains Mike Bedford White's, on 0121 605 4438, anytime after 11am.

Email: mikebwhite@blueyonder.co.uk

QUANTA DORSET SUBGROUP - Dorset

Meetings are held, on the second Sunday of each month between 2.00pm and 5.00pm.
For location please contact:- John Penn-Simkins or John Mason.

John Penn-Simkins 01202 422491 or John Mason 01425 275894

LONDON QL AND QUANTA GROUP

Meetings are held in the School Room, which is the basement of the Borough Welsh Congregational Chapel, 90, Southwark Bridge Road, London SE1. This is almost opposite the junction with Marshalsea Road, at the other end of which, 5 minutes walk away, is the Borough Underground Station. Free parking is easily available in Southwark Bridge Road for road users, Cyclists are welcome.

Members currently each pay a subscription of £40 per year towards the cost of the hire of the hall and a small additional charge is made for tea/coffee - biscuits are then provided free.

Please bring your QL equipment if possible, all types welcome, e.g., PC portable running emulators. The Group has some systems stored at the venue for its use. In addition, there are lots of donated second user equipment, books, magazines, etc, available for purchase.

Time: 2.00 pm. to 5.00 pm., on the second Sunday of the month.

No meetings are held in either December - winter break, or August summer break. Giving 10 meetings a year.

Malcolm Cadman: Tel: 020 8691 5780

email: QL@mcad.demon.co.uk

NEMQLUG - THE NORTH EAST MANCHESTER QL USER GROUP

Meetings are held at 181, Urmston Lane, Stretford, Manchester. M32 9EH (Near Junction 7 of M60 Motorway - Was Junction 7 M63 Motorway). Our informal meetings start at 7 p.m. and finish at 11 pm. All welcome.

Meets on the last Thursday of each month (except December).

John/Sarah Gilpin 0161-865 2872 (thegilpins@btopenworld.com)

SCOTTISH QL USERS GROUP

S QLUG meets at George Gwilt's home every second Sunday in the month. Please contact George Gwilt before coming to get the location.

Gdgqler@gmail.com

SOLENT SUBGROUP

M eets at Botley Market Hall, all welcome. Park at the back and use side entrance.

1st Saturday of the month from 2.00 pm to 6.00 pm.

Graham Evans, Tel: 023 8040 3350.

SURREY QUANTA SUBGROUP (SQSG)

T he group is currently trying other venues in the Leatherhead - Epsom area. If you plan to attend but do not get our emails, please phone or email Ken Bain for the latest location.

Meetings are 8.00 to 10.00 pm. On the last Wednesday of each month except December.

Ken Bain - 01932 - 347 432 (to midnight), kenb@bcs.org.uk

SUSSEX QL USER GROUP

C urrently without a meeting place, anyone interested should contact Keith Mitchell or Roy Wood.

Roy Wood, 01273 430501 or Keith Mitchell, 01903 742263.

QUANTA Magazine
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QALENDAR 2011

That most desirable of QL accessories, the QaLendar for 2011 is now available to download from:-

http://www.dilwyn.me.uk/gen/calendar/calendar.html

The calendar is available as either a Word.docx file for Office 2007/10 users (if you wish to edit it) or in a more compact .PDF format.

NEMQLUG SUBGROUP NEWS

NEMQLUG Subgroup (North East Manchester QL User Group) will be holding their annual Christmas Dinner on Friday, January 28th 2011(instead of their usual Subgroup meeting) at the Pond Quay Chinese Restaurant,15, Croftsbank Road, Urmston. M41 0TZ at 7:30 pm. Any Qler (QUANTA member or not) able to attend will be very warmly welcome to join us for the evening. Please book your place with Sarah Gilpin (chairman@quanta.org.uk) on or before 14th January 2011.